

REMARKS

The Official Action of December 6, 2004, and the prior art cited and relied upon therein have been carefully studied.

Claims 1, 17, and 37-40 have been amended. New claims 41 and 42 have been added. The claims remaining in the application are now claims 1-11, 13-30, and 32-42, and these claims define patentable subject matter warranting their allowance. No new matter has been added. Reconsideration is respectfully requested.

The specification was objected to for incorporating browser executable code by reference. Applicant has amended the specification to remove the incorporations by reference. Applicant respectfully submits that this objection has now been overcome.

The Examiner has rejected claims 1-10, 13-28, 30, and 32-36 under U.S.C. §103(a) as being unpatentable over "Coverability Analysis Using Symbolic Model Checking" published in the March 1998 IBM Research Disclosure (IBM) in view of the "Background of the Invention" (BOTI) of the present application; claims 11 and 29 under U.S.C. §103(a) as being unpatentable over IBM in view of BOTI, and further in view of U.S. Patent 5,579,515 to Hintz et al., and claims 37-

40 under U.S.C. §103(a) as being unpatentable over IBM in view of BOTI, and further in view of U.S. Patent 6,484,134 to Hoskote. Applicant respectfully traverses all of these rejections especially as applied to the claims as amended and new claims 41 and 42.

Applicant has amended independent claims 1 and 17 to sharpen the differences of the claims over the cited art, by incorporating into claim 1 the limitations of its dependent claim 12, and by incorporating into claim 17 the limitations of its dependent claim 31. In regard to claim 12 and claim 31, the Examiner cited IBM: " ... a warning on the existence of dead-code is created for every statement that cannot be reached." The Examiner stated that this implied evaluation of attained and unattained coverability. Applicant respectfully traverses this implication.

The quoted clause is part of a paragraph comparing coverability analysis and coverage analysis, and the last two sentences of the paragraph, including the clause above, state:

"In coverability analysis, a rule for every statement would be automatically generated that checks that it can be reached. These rules are executed on the Model Checker

and a warning on the existence of dead-code is created for every statement that cannot be reached."

Thus, IBM states that a rule checks whether a statement can be reached; if it cannot be reached a warning is created. However, checking that a statement can or cannot be reached does just that, and does not correspond to evaluating an attained coverability, nor to evaluating an unattained coverability, as is required by amended claims 1 and 17.

The Examiner also cited IBM: "Automatically determining which of the coverage event indicators correspond to coverable events," and stated that this requires comparison and analysis of the behavioral model The IBM statement is part of a section describing how coverability analysis can be used to complement traditional coverage analysis techniques, and describes determining a correspondence between coverage event indicators and coverable events, whereas amended claims 1 and 17 both recite performing a comparison between the attained coverability and the coverability tasks. The comparison required by claims 1 and 17 is completely different from the correspondence of the IBM statement.

Furthermore, careful inspection of the complete IBM document neither teaches nor suggests evaluating an attained

coverability, evaluating an unattained coverability, or performing a comparison between the attained coverability and the coverability tasks, all of which are required by amended claims 1 and 17. Applicant therefore respectfully submits that claims 1 and 17 are patentable over the cited art.

New claim 41 depends from claim 1, and new claim 42 depends from claim 17. Claims 41 and 42 recite generating a number of rules less than or equal to a number of basic blocks, where the number of rules is a function of a control-flow structure. Support for claims 41 and 42 is found in paragraph [0086] of the specification, which also gives numerical reduction factors for the number of rules.

Claims 2-11, 13-16, 18-30, and 32-36, depend from claim 1 or claim 17. In view of the patentability of claims 1 and 17, claims 2-11, 13-16, 18-30, 32-36, and claims 41 and 42, are believed to be patentable as well.

Claims 37 and 39 are independent claims respectively reciting an apparatus and a computer software product corresponding to claim 1. Claims 38 and 40 are independent claims respectively reciting an apparatus and a computer software product corresponding to claim 17. Applicant has amended claims 37 and 39 by incorporating the limitations of

claim 12 into the claims, and has amended claims 38 and 40 by incorporating the limitations of claim 31 into the claims. In view of the arguments presented above with regard to claim 12 and claim 31, applicant believes that amended claims 37-40 are patentable as well.

Applicant has studied the additional prior art made of record by the Examiner. Applicant notes that "Improvements in Coverability Analysis" by Ratsaby et al. was published in 2002, after the filing date of the present application. Applicant believes the amended claims in the present patent application to be patentable over the cited prior art as well, whether taken alone or in combination with other prior art.

Applicant believes that the above amendments and remarks are fully responsive to all of the objections and grounds of rejection raised by the Examiner. In view of these amendments and remarks, applicant respectfully submits that all of the claims currently pending in the present application are in order for allowance. Notice to this effect is respectfully requested.

The prior art documents made of record and not relied upon have been noted along with the implication that such documents are deemed by the PTO to be insufficiently

Appln. No. 10/003,482
Amdt. dated March 3, 2005
Reply to Office Action of December 6, 2004

pertinent to warrant their applications against any of
applicant's claims.

Favorable reconsideration and allowance are
earnestly solicited.

Respectfully submitted,

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